ABSTRACT

A honeycomb structural body comprises one or plural pillar-shaped porous ceramic members in which many through-holes are arranged side by side in a longitudinal direction through partition walls and either one end portions of these through-holes are sealed.

The partition wall forming the structural body has a surface roughness of not less than 10 μm as a maximum roughness Rz defined in JIS B0601-2001 and an average pore size of 5-100 μm in a pore distribution measured by a mercury pressure method, and satisfies the following relationship:

$$A \geqq 90-B/20 \text{ or } A \leqq 100-B/20$$

when a ratio pores having a pore size of 0.9-1.1 times the average pore size to total pore volume is A (%) and a thickness of the partition wall is B (μm), and there is proposed an effective honeycomb structural body having excellent pressure loss and catching efficiency and a high catalyst reactivity.